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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/066,407      | 01/31/2002  | Ronald E. Pelrine    | 8500-0267           | 3746             |

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EXAMINER

VALENTINE, DONALD R

ART UNIT      PAPER NUMBER

1742

DATE MAILED: 08/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

|                                 |                               |
|---------------------------------|-------------------------------|
| Application No.<br>10/066,407   | Appl. No(s)<br>PELRINE ET AL. |
| Examiner<br>Donald R. Valentine | Art Unit<br>1742              |

-- Th MAILING DATE of this communication appears on the cover sheet with the correspondenc address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1)  Responsive to communication(s) filed on \_\_\_\_\_.
- 2a)  This action is FINAL.
- 2b)  This action is non-final.
- 3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4)  Claim(s) 1-70 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5)  Claim(s) 39-68 is/are allowed.
- 6)  Claim(s) 1-4,10-13,25,36,37,69 and 70 is/are rejected.
- 7)  Claim(s) 5-9,14-24,26-35 and 38 is/are objected to.
- 8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9)  The specification is objected to by the Examiner.
- 10)  The drawing(s) filed on 31 January 2002 is/are: a)  accepted or b)  objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11)  The proposed drawing correction filed on \_\_\_\_\_ is: a)  approved b)  disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12)  The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14)  Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a)  The translation of the foreign language provisional application has been received.
- 15)  Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1)  Notice of References Cited (PTO-892)
- 2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3)  Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4)  Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.
- 5)  Notice of Informal Patent Application (PTO-152)
- 6)  Other:

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4, 10-13, 25, 36-37 and 69-70 are rejected under 35 U.S.C. 102(b) as being anticipated by Tsubota et al.

Tsubota et al show a substrate with an upper surface (3); an elastic sheet (33) with an upper surface and opposing lower surface with the lower surface facing the upper surface of the substrate (Fig. 12). An elastic sheet is immobilized with respect to the substrate at a minimum of two immobilization points (Fig. 12, or Fig 29) and has a deflectable active area (see the areas cut out (34), Figure 11, and column 13, lines 39-42). There is a pressure means, which deflects the active area of the sheet away from the upper surface of the substrate. (See fig. 19). Liquid crystal or nitrogen (a fluid) is injected into the apparatus. (See col. 3, lines 36-67; col. 9, lines 3-40; col. 18, lines 22-59 and Figure 36).

As for claims 10-13, the reference recites fluorine resin at column 8, lines 36-43.

Figures 13B, 19, 31 appear to suggest the language of claim 69.

Column 7, lines 32-68 appear to suggest the method recited by claim 70.

Statements of intended use are not given weight when considering the patentability of apparatus claims.

***Allowable Subject Matter***

3. Claims 39-68 are allowed.
4. Claims 5-9, 14-24, 26-35 and 38 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
5. The following is a statement of reasons for the indication of allowable subject matter: The references of record do not show or suggest a device which has a substrate with an upper surface, an elastic sheet having an upper surface and an opposing lower surface with the lower surface facing the upper surface of the substrate wherein an elastic sheet is immobilized with respect to the substrate at a minimum of two points and has a deflectable active area at least partially contained between the immobilization points, an actuation means for deflecting the active

area of the sheet away from the upper surface of the substrate and where the substrate has a rigidity pf at least 10 times that of the elastic sheet.

### *Conclusion*

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hashizume et al show an elastic sheet in combination with a substrate and electrodes; Millington et al show a electrodes with a membrane and an "actuator"; and Rikuta et al show a constant fluid flow valve.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald R. Valentine whose telephone number is 703-308-3327. The examiner can normally be reached on Monday-Friday 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 703-308-1146. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



Donald R. Valentine  
Primary Examiner  
Art Unit 1742

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